

Saturday Magazine.

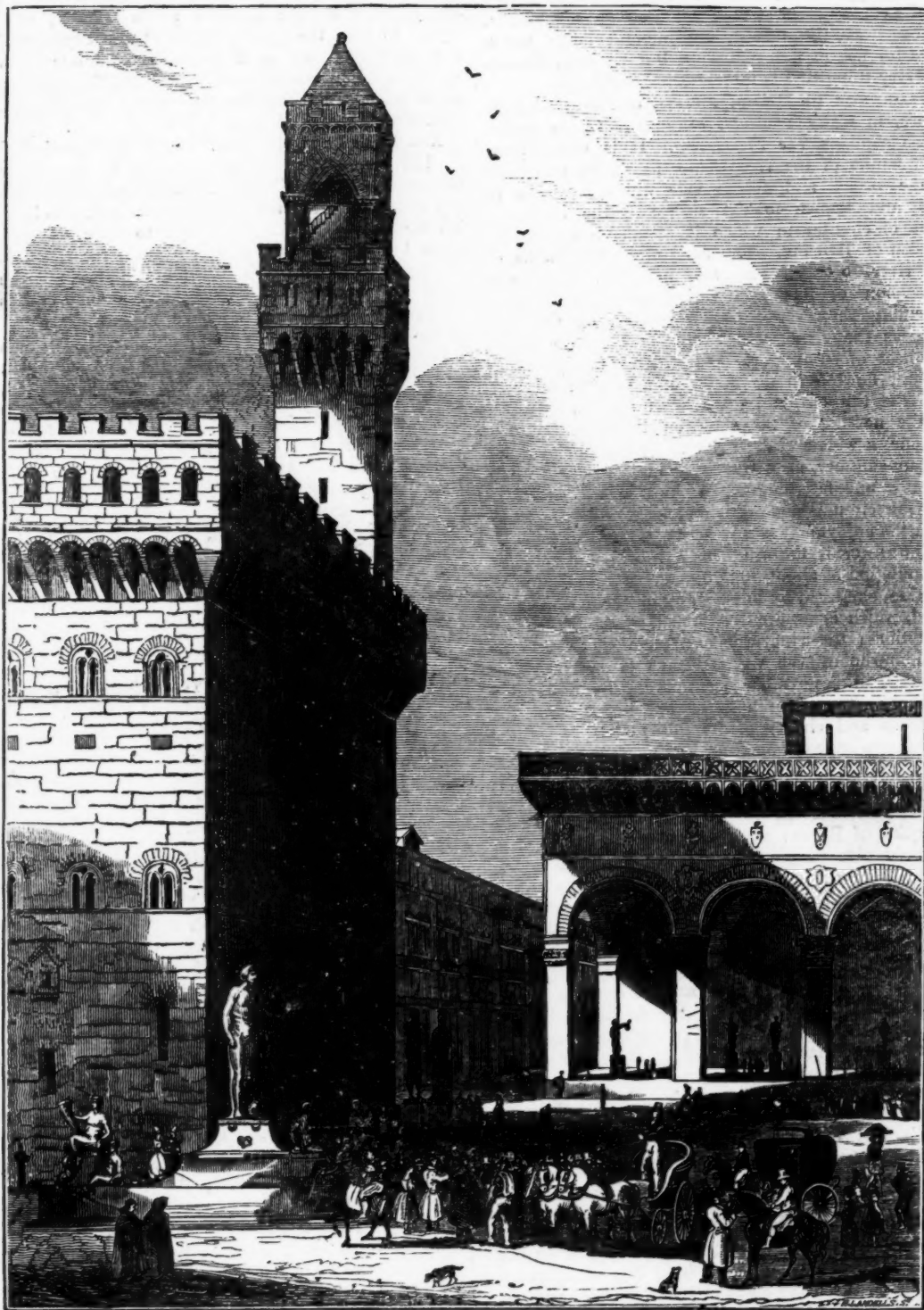
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THE DUCAL PALACE, FLORENCE.

THE PALAZZO PITTI*, or DUCAL PALACE, FLORENCE.

OUR engraving represents the Palace of Leopold, Grand Duke of Tuscany, situated in the great square of Florence, a point of much attraction to strangers visiting that celebrated city. It is a good specimen of the architecture of Florence, where the buildings are ancient and lofty, while its spacious palaces, the remnant of flourishing periods, are of a stern and sombre appearance, but look strong in their old age. In the construction of the Ducal Palace, for instance, we can trace, throughout, uncommon solidity, and a plentiful use of rich materials, but an utter disdain of every thing that is merely ornamental.

FLORENCE (in Italian, *Firenze*, or *Fiorenza*), continues, in many respects, to answer to its name, which signifies *The Flourishing*. It is situated on both banks of the river Arno, nearly at the head of the broad and fertile vale which stretches to Pisa, and thence to the sea; and the charming tract of country in which it stands, is called the Garden of Tuscany. The road along the banks of the river, between Pisa and Florence, presents a succession of fine and varied prospects, greatly depending, however, for their beauty, on the season; as the Arno, which crosses Florence, is, in the heat of summer, a shallow and mean-looking stream, flowing in the midst of a very broad bed, and is at times fordable; but, when swollen by rains, or the melting of the snow on the mountains, it becomes a wide and deep river. In the height of an Italian summer, also, travelling in the day is often irksome and fatiguing, on account of the excessive heat; a circumstance which alone would take away from the enjoyment of any scenery, however lovely.

FLORENCE is, in form, nearly an oval, and contains a population of about 80,000 persons. Its delightful position, sheltered by hills, many of them well cultivated, which again are overtopped by the snow-clad Apennines; the vineyards and olive-grounds in its neighbourhood; the various gems of art which it contains, in pictures, statues, monuments, and noble buildings; the cleanliness of the hotels, and the mildness and civility of its inhabitants; all these advantages have obtained for Florence the title of the "*Athens of Italy*," and render it an agreeable residence. The number of foreigners living there is generally greater than that in any other Italian city, with the exception of Rome: among these are many English. It would give us pleasure, did our limits allow us, to dwell on the amiable points of character which most travellers agree in assigning to the Florentines: we mean their gentleness and courtesy to strangers, as well as their humane and charitable disposition to the sick and distressed among their people. We might also touch upon their neat and musical Italian dialect. But we must return (for the illustration of our print) to the city, its architecture, and its palaces, particularly the *Palazzo Pitti*, with its lofty and frowning tower.

Florence is greatly improved since Bishop Burnet's time, when "not one window in ten had any glass in it." But it was then in a low condition, owing to the decay of trade. More attention is now paid, in this, as well as in other towns on the continent, to what we English people call *comfort*, than was formerly the case; yet still, the streets are in general very narrow, paved with large flag-stones, which are closely fitted to each other, with no line of difference between the foot-way and the carriage-road, and remind an English traveller of broad alleys in London;

so that, while, at Paris, every body has to walk on the carriage-road, at Florence, all the carriages seem to be on the footpath. Here the carriages of the gentry are numerous, and often splendid, even rivaling those in London: they are chiefly brought from Milan, a place noted for their manufacture.

The vast and massive style in which the old mansions of Florence are built, has been followed in more modern days, now that there is no longer that need of defence which existed, when feelings of hatred and jealousy burned between noble families, each trying to gain the pre-eminence at the expense of a great neighbour; as if forgetting that one main source of happiness is found in walking through this life as friends, and that the same common dust must soon cover them, and all their boasted pomp.

Arnolfo di Lapo, who flourished in 1290, and died in 1330, was the builder of some of the larger structures now remaining. At a time when Florence was at the height of her prosperity, he seems to have led the way as an architect, and to have stamped upon the city that air of sullen grandeur which it has never lost, and which, at the first glance, fills the mind with wonder. Such heavy and gloomy fabrics are certainly calculated to give a melancholy aspect to the place; but with so many objects of historical interest, and so many treasures of art on all sides, and, withal, a cheerful and pretty large population, Florence is seldom accused of being dull. It has the aspect of a city filled with nobles and their domestics; a city of bridges, churches, and palaces. Four bridges cross the Arno, of which the *Ponte della Trinità*, formed of three elliptic arches of white marble, is one of the most graceful bridges in the world; an exception, in point of lightness and elegance, to the style prevailing around it. The famous *Florentine Gallery* is enriched with statues, busts, and paintings, of the highest order of art, many of them having been contributed by members of the splendid family of Medici, with whom, indeed, this noble museum had its origin. The building forms three sides of an oblong square. To go into the details here, or even to attempt a general account of its contents, would be vain. The principal treasures of the collection, however, are the statues and busts.

From this *Gallery* (which stands on the north bank of the Arno,) a bridge leads to the *Palazzo Pitti*, on the south side, where the Grand Duke, as an absolute sovereign, resides, and holds his court. This palace, now called *Palazzo Ducale*, and commonly by the English *The Pitti Palace*, is supposed to have been built by Luca Pitti, a Florentine merchant, with the ambitious and foolish design of out-doing in magnificence the Medici family, the objects of his rivalry; but he nearly ruined himself by the expense. It is a rude and simple pile, defective in its masonry, yet having, from its towering height and size, an imposing effect, particularly fronting the street. In the space opposite to it are seen statues, larger than life, including the *Hercules* by Bandinello, and the *David* by Michael Angelo. On going through the palace, the visiter finds that it forms three sides of a court, which has a fountain on the fourth; behind this are the admired groves of the *Boboli* gardens. John Ray, the naturalist, who travelled over the continent in search of plants, and among other places, visited Florence in 1664, says—

I might spend many words in describing the *Grand Duke's* palace, and gardens, stored with great variety of trees and shrubs, valuable for shade, beauty, fruit, and scent; adorned with a multitude of statues, thick set up and down the walks and knots; pleasant fountains and water-works; stately and delicious walks, both close and open; goodly flowers and choice plants. In Florence

* THE PITTI PALACE, so called after the name of its founder.

many of the palaces are made of great rough-hewn stones, not laid smooth, but projecting above the surface of the wall: which fashion of building is called *The Rustic manner*.

The garden-front of the palace has been much blamed for the strange mixture of its architecture; but, we repeat that bulk and strength were the chief aim in this and other fabrics, joined, however, with much that is noble and elegant. In such palaces, in former days, the rulers, the noble, and the merchant, dined together, surrounded by their family and the adherents of their party; their guests were seated in the order in which they arrived. At the board of Lorenzo the Magnificent, whose court was adorned by the most distinguished men of the age, as well in literature and science, as in rank and wealth, Michael Angelo, and other great artists, were often seated next to himself; and, notwithstanding the occasional feuds which raged between certain great clans, there existed a kindly feeling among the various classes of society, which, although Florence has passed the days of her political and commercial importance, seems still to continue, and to claim the notice of strangers.

The apartments of the *Pitti Palace* are exceedingly elegant, and contain the best collection of pictures in Florence, we may add, perhaps, in the world. Many of these were carried away by Napoleon Buonaparte, when Italy was overrun by the French armies under his command, but they are now all restored: they are hung in rich frames, on dark green and crimson velvet grounds: the ceilings of the rooms are admirably painted in fresco.

The architect of the palace was Brunelleschi, who flourished in 1420, and at that time became famous for erecting a large and extraordinary dome on the Cathedral of Florence. This dome, or cupola, was the admiration of Michael Angelo, who thought it a triumph of skill; and it is said by some to have furnished the idea of that of St. Peter's, at Rome. It has no columns to assist, no hidden buttresses to shore it up, and is nearly fifty feet higher than the dome of St. Paul's, London. Of all the churches of Florence, the Cathedral is the first in size and ornament.

Almost every family of property in Florence possesses, at some distance from the town, a vineyard, the surplus wine from which is disposed of in a very singular manner. In the walls of their large and noble mansions, are holes large enough to admit a three-quart bottle, and persons, of whatever degree, call at any hour, and, knocking at the porch, thrust in their vessels, with a certain sum of money, which are immediately returned, with a due quantity of wine. This trade is not confined to persons of moderate rank, but is a source of revenue even to counts and dukes.

THE RUINS OF TYNEMOUTH PRIORY.

IN 120, A.D., the Romans, to protect their possessions in this island from the incursions of the Picts and Scots, built a fortified wall across the narrowest and most northern part of their dominions. This wall ran in a direct line, nearly from sea to sea, through the present counties of Cumberland and Northumberland. The eastern extremity of this fortification terminated at Segedunum, to this day called Wall's-end, a station on the northern bank of the Tyne, about four miles from the mouth of the river. The breadth of the river below this point, appears to have been considered by them as sufficient protection for the short remainder of the distance; but at the mouth, on one or both sides, they thought it neces-

sary to erect some fortifications. Indistinct traces, but of considerable extent, have been found at South Shields, of Roman buildings; stones, with inscriptions upon them, occurring among the monastic ruins of Tynemouth, present a less certain evidence of that people having also resided there.

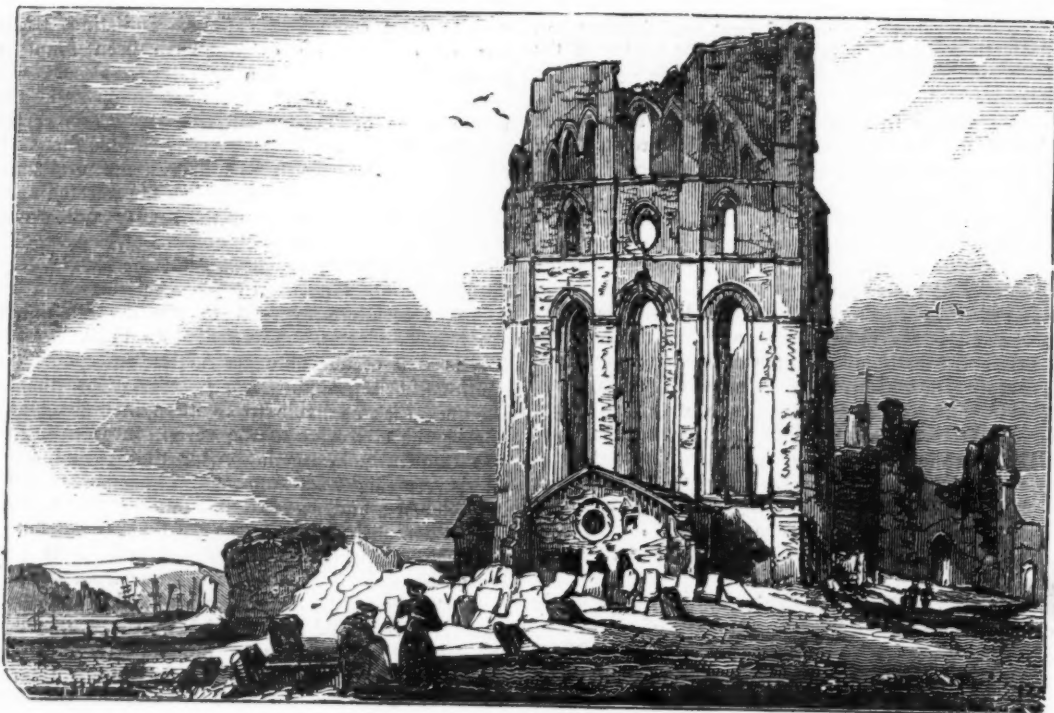
Whether Tynemouth was, or was not, of Roman foundation, it was at a very early date selected as an ecclesiastical site, for which the beauty and peculiarity of its situation well adapted it. A wooden chapel was built there, in A.D. 625, by Edwin, King of Northumberland. No place, perhaps, in the island, was more exposed to the devastations of the Danish pirates. From 625, to 1110, its history is that of alternate destruction and renovation continually repeated. Long subsequent to the Conquest, it was liable to Scottish incursions, and, during the civil wars of the seventeenth century, it was frequently besieged. After that period, when all danger might be supposed to have passed away, its extensive and exquisitely-beautiful ruins, were almost demolished for the sake of their materials.

Much of the priory of Tynemouth, it is probable, was built with the hewn stone from the Roman station at the Law, South Shields; and great part of the town of North Shields, in return, is said, to be built from the ruins of the monastery. Dock-wray square in particular, is popularly spoken of, as having been constructed from this source. Nor was this all. Being used as a barrack and military store, the work of demolition and alteration has been gradually continued, down to a late period. The most conspicuous part of the ruin now standing, is the three very beautiful eastern windows of the chapel, represented in the engraving*.

Tynemouth stands upon a promontory of limestone, rising perpendicularly from the sea to a very considerable height. At the eastern extremity of the cliff, are the ruins of the priory, which, from their great elevation, form a very conspicuous sea-mark: adjoining them, is an excellent light-house upon the revolving principle. About an hundred yards west of the monastic ruins, stands the castle, which is now transformed into a plain and unpicturesque building, and fitted up as barracks for the accommodation of a corps of infantry, which, with some artillery, are always stationed there. Beyond the castle, lies the village of Tynemouth, composed chiefly of lodging-houses for the reception of bathers, who flock thither during the summer-months, from all the surrounding neighbourhood, and particularly from Newcastle.

The port of Newcastle is an object of some importance in the nautical history of this country. Until within the last few years, nearly all the coal consumed in London was shipped from it. Newcastle on Tyne, lies about ten miles from the mouth of the river, and upon the northern or Northumbrian bank. On the south side, in the county of Durham, but connected with Newcastle by a substantial bridge, is the newly-created borough of Gateshead, where the cholera raged with peculiar virulence, in December, 1831, on its first appearance in this country. The banks of the river, on both sides, are edged by collieries, by pit-rows or colliery-villages, and by staiths, or machines for shipping the coal, when brought from any distance. Wallsend, mentioned before, and Howdon on the north, with Jarrow, formerly the residence of the venerable Bede, Hebburn, and Felling, whence the well-known Newcastle grindstones

* We are indebted to Mr. T. M. Richardson, of Newcastle, for the drawing from which this engraving was made (as well as for those of Warkworth castle, already given): and hope shortly to furnish views of other interesting objects in the North of England, from drawings by the same able artist.



THE RUINS OF TYNEMOUTH PRIORY

are shipped, on the south, are the principal villages. At the mouth of the river, on the north side, running within half a mile of Tynemouth, on the south side extending to the very edge of the sea, lie the two towns of North and South Shields.

The term Shields, or *Sheals*, is of frequent occurrence in the north of England, in the names of places, and signifies, a small collection of huts or paltry buildings*. Both these towns are of considerable antiquity, but have only flourished within about a century. South Shields was, as is mentioned above, a Roman station, and probably of no very trifling importance, as the road Wreken Dyke ran from it. During the middle ages, it appears, however, to have sunk into entire insignificance. From this it emerged, owing to the establishment of the salt-trade, towards the close of the fifteenth century. Salt was long the staple commodity of the place, and Shields salt bears still a preference in the markets. The process by which it was obtained, was by evaporation from salt-water, exposed in shallow vessels termed Pans. Of these pans, not half a dozen are now in use; but at the close of the seventeenth century, one hundred and fifty were in full activity. The town is divided into wards, still called, from these manufactories, East-pan-ward, West-pan-ward, &c. As the salt-trade declined, others rose, which more than compensated for the loss. Glass became a commodity, in the production of which South Shields particularly excelled. Bottle-glass, crown or window-glass†, and latterly, plate-glass, have been made in this town in great quantities. The principal support, however, of the place, has been, and is, its shipping, and those trades principally connected with shipping. The population of the town is about 18,000; the houses are generally mean; though there is a good market-place and some respectable streets leading from it. The right of returning one member to Parliament, was given to it by the bill of 1832. It is in the county and diocese of Durham. There is a large and com-

dious church, situated in the market-place; a chapel containing 700 free sittings, was built in 1818, chiefly at the expense of the Dean and Chapter of Durham, who are lords of the manor, and who are now engaged in erecting another chapel.

North Shields is a larger town, containing about 20,000 inhabitants. Not having, however, engaged in trade, it did not become a place of any consequence, previous to the time of Oliver Cromwell, who, by the removal of certain restrictions which had been imposed by the corporation of Newcastle, enabled it to engage successfully in navigation. Its external appearance is much the same as that of South Shields. Like that place, its population is chiefly dependent upon the sea, and upon the various trades which are supported by the shipping. The vessels in which the fuel of the metropolis was conveyed, belonged almost entirely, until within the last few years, to the port of Newcastle; that is, to the towns on the Tyne. Besides collier-brigs, there is also a considerable trade to the Baltic and the Canadas for timber, and several vessels are annually fitted out for the Greenland fishery. During the late war, the ship-owners of this port carried on a very lucrative connexion with government, by hiring out their vessels for the conveyance of troops or stores: this was called the transport-service.

The total present tonnage of the port is 211,148 tons, employing 8444 men; of these, 69,744 tons belong to North Shields, affording, at the average of four men to the hundred tons, employment to 2789 seamen: South Shields, in like manner, furnishes 67,980 tons, and 2719 men.

The sailors from the Tyne will be famous so long as European history is read, as having formed the principal equipment of those fleets, which, under Nelson, St. Vincent, Collingwood, and others, raised the British flag to its proudest elevation. A wreck which took place off the mouth of this river some years ago, was the cause of the invention of the life-boat, a contrivance by which numerous lives are now saved every year on all parts of the British coast; and with a more detailed account

* The word *Shielding* is still applied in Scotland to such edifices.
† See *Saturday Magazine*, Vol. lii. p. 132.

of which we hope soon to present our readers. North Shields has been, since the recent Act, represented by one member. It contains one church, the presentation to which is alternately in the gift of the Duke of Northumberland and of Sir Jacob Astley, who possesses the property of the ancient family of Delaval, of Seaton Delaval.

EMINENCE FROM HUMBLE LIFE.

JAMES FERGUSON, who distinguished himself as a mathematician, mechanic, and astronomer, gives the following interesting account of his early life: I was born in the year 1710, a few miles from Keith, a little village in Bamffshire, in the north of Scotland; and can with pleasure say, that my parents, though poor, were religious and honest; lived in good repute with all who knew them, and died with good characters. Though my father had nothing to support a large family but his daily labour, and the profits of a few acres of land which he rented, yet his children were not neglected, for at his leisure hours, he taught them to read and write; and it was while he was teaching my elder brother to read the *Catechism*, that I acquired my reading. Ashamed to ask my father to instruct me, I used, when alone, to study the lesson which he had been teaching my brother; and in any difficulty, I went to a neighbouring old woman, who gave me such help as enabled me to agreeably surprise my father, when he found me one day reading by myself, before he had thought of teaching me: he, therefore, gave me further instruction, and taught me to write; which, with about three months I afterwards had at the grammar-school at Keith, was all the education I ever received.

My taste for mechanics arose from an odd accident. When about seven or eight years of age, a part of the roof of the house being decayed, my father, in repairing it, applied a prop and lever to an upright spar, to raise it to its former situation; and to my great astonishment, I saw him, without considering the reason, lift up the ponderous roof, as if it had been a small weight. I attributed this at first to a degree of strength that excited my terror as well as wonder; but, thinking further of the matter, I recollected that he had applied his strength to that end of the lever which was farthest from the prop; and finding, on inquiry, that this was the cause of the seeming wonder, I began making levers, (which I then called *bars*), and tried different experiments with them, and with wheels, which I made with my father's turning-lathe and a little knife.

But, as my father could not afford to maintain me, while I was in pursuit only of these matters, and I was too young and weak for hard labour, he put me to a neighbour to keep sheep, and then I began to observe the stars by night, fixing their places on a string with small beads on it, and then marking them down on paper. I then went to serve a considerable farmer, whose name was James Glashan; when he saw me, after my work was done, go into a field, with a blanket about me, and lie on my back to observe the stars, he at first laughed at me, but, when I explained my meaning to him, he encouraged me to go on, and that I might make fair copies in the day-time of what I had done in the night, he often worked for me himself, taking the threshing-flail out of my hand, while I sat by him in the barn, busy with my compasses and pen. I shall always have a respect for the memory of that man.

At this time, a gentleman, Thomas Grant, Esq., of Achoyrnaney, happening to see one of my plans, asked me to go to his house, as his butler could give me a great deal of instruction. I would not leave my good master till my time was out; but I then went to Squire Grant's, where the butler, Alexander Cantley, soon became my friend, and continued so till his death. He was an extraordinary man,—a complete master of arithmetic, a good mathematician, a master of music, understood Latin, French, and Greek, and could even prescribe as a physician upon an urgent occasion.

When I returned home, I could not think of being a burden to my father, so I went to a miller, thinking I should have plenty of time for my studies; but my master was so fond of the ale-house, that the whole care of the mill was left to me, and I was so nearly starved, that I was glad when I could get a little oatmeal mixed with water to eat. When my year's engagement with this man was over, I went to a farmer, who practised as a physician, and who promised to teach me that part of his business, but

instead of that, he never once showed me his books, but kept me to such hard labour, that I was disabled, from being overworked; and when my illness obliged me to leave him, he would pay me nothing for my three months' labour, because I had not completed my half-year's service. In my weak state, I made a wooden watch and clock, and other things, which I took, when I was recovered, to Sir James Dunbar, of Duru, who, I heard, was a good-natured gentleman; he received me very kindly, and by means of this introduction, I was afterwards enabled to go to Edinburgh, and pursue my favourite studies, and also had the pleasure of occasionally supplying the wants of my poor father.

James Ferguson, whose own account of his early life is here given, became a Member of the Royal Society of London, a celebrated lecturer on Astronomy and Natural Philosophy, and the author of several scientific works. Among the attendants on his lectures was the then Prince of Wales, afterwards George the Third, who settled upon Ferguson a pension of fifty pounds a year. He was a man of plain and unassuming manners, and frugal habits, and at his death, in 1776, was worth six thousand pounds.

SUPPLEMENT TO

GRAY'S ELEGY IN A COUNTRY CHURCH-YARD.

The celebrated *Elegy in a Country Church-Yard*, by GRAY, is well known, and justly admired, by every one who has the least pretensions to taste. But with all its polish, and deep poetic beauty and feeling, it always appeared to me to be defective, and I have met with a remark in *Cecil's Remains*, to the same effect. Amid a scene so well calculated to awaken in a pious mind reflections on the sublime truths, and inspiring hopes of Christianity, Gray, with the exception of two or three somewhat equivocal expressions, says scarcely a word which might not have been said by one who believed that "death was an eternal sleep," and who was disposed to regard the humble tenants of those tombs as indeed "each in his narrow cell for ever laid." With these views I have regretted, that sentiments similar to the following had not sprung up in the heart, and received the exquisite touches of the classic pen of Gray. They might, with great propriety, have followed the stanza, beginning

Far from the madding crowd's ignoble strife.

No airy dreams their simple fancies fired,
No thirst for wealth, nor panting after fame;
But truth divine sublimer hopes inspired,
And urged them onward to a nobler aim.

From every cottage, with the day arose
The hallowed voice of spirit-breathing prayer;
And artless anthems, at its peaceful close,
Like holy incense, charmed the evening air.

Though they, each tome of human lore unknown,
The brilliant path of science never trod,
The Sacred Volume claimed their hearts alone,
Which taught the way to glory and to God.

Here they from truth's eternal fountain drew,
The pure and gladdening waters day by day;
Learnt, since our days are evil, fleet, and few,
To walk in wisdom's bright and peaceful way.

In yon lone pile, o'er which hath sternly pass'd
The heavy hand of all-destroying Time,
Through whose low-mouldering aisles now sighs the blast,
And round whose altars grass and ivy climb:

They gladly thronged, their grateful hymns to raise,
Oft as the calm and holy Sabbath shone;
The mingled tribute of their prayers and praise,
In sweet communion rose before the Throne.

Here, from those honoured lips, which sacred fire
From Heaven's high chancery hath touched, they hear
Truths which their zeal inflame, their hopes inspire,
Give wings to faith, and check affliction's tear.

When life flowed by, and, like an angel, Death
Came to release them to the world on high,
Praise trembled still on each expiring breath,
And holy triumph beamed from every eye.

Then gentle hands their "dust to dust" consign;
With quiet tears, the simple rites are said,
And here they sleep, till at the trump divine,
The earth and ocean render up their dead.

[FROM AN AMERICAN WRITER.]

So completely is the ground impregnated with seeds, that if earth is brought to the surface from the lowest depth at which it is found, some vegetable matter will spring from it. In boring for water lately, at a spot near Kingston-on-Thames, some earth was brought up from a depth of 360 feet; this earth was carefully covered over with a hand-glass, to prevent the possibility of other seeds being deposited upon it, yet, in a short time, plants vegetated from it.—JESSE.

FAMILIAR ILLUSTRATIONS OF NATURAL PHENOMENA

No. VII. THE TRADE WINDS.

IN our own climate, the uncertainty of the wind has almost become a proverb. But we can yet see, that there are some general rules by which the currents of the air seem to be governed. Taking the average of the whole year, the wind blows much more frequently from the westerly quarter of the heavens than from the east; but there are several weeks in the spring, and in the early part of the summer, when easterly winds prevail. These effects are far too constant to arise without some fixed cause; and it is to be regretted, that we do not yet know enough of the course and force of the winds, to discover what all those causes are.

But, in other parts of the world, especially between the tropics, the winds blow with much greater regularity. Their direction can be calculated upon with such a degree of certainty, as to render them of the utmost importance to navigation; hence these stated currents of the air are called the *Trade Winds*.

The general phenomena are of this nature. Between the tropics, the tendency of the wind is from the eastward towards the west. To the north of the Equator, the wind blows from about N.E. to S.W.; and, to the south of the Equator, it blows from about S.E. to N.W. From some little distance, on either side of the Equator itself, there is no regular wind. There are usually baffling calms, accompanied with occasional violent storms.

The cause of the Trade Winds is very simple. They arise from the currents of cold air setting from the Poles towards the Equator, combined with the motion of the earth itself upon its axis. It is easy to see, that the action of the heat of the sun has a constant tendency to cause currents in the air. When air is heated, it becomes lighter than it was before; and any one may satisfy himself, that a current will be produced, when hotter and colder air communicate with each other, by holding a candle at the bottom and at the top of an open door, which communicates between a warm room and a cold passage; he will see that the warm air is running out at the top, while the cold air is running in at the bottom.

Supposing, then, the whole earth to be at rest, and to be heated in the regions about the Equator much more than about the Poles, the air, at the earth's surface at the equator, being heated, would rise, and flow at the top of the atmosphere from the equator towards each pole, while the colder air of the poles would flow, at the bottom of the atmosphere, from the poles towards the equator, and thus a constant change of air would take place. On the surface of the earth there would be a constant northerly wind in the parts to the north of the equator, and a constant southerly wind in the parts to the south of the equator; but, near the equator itself, there would be a calm, the currents from North and South balancing each other, and the air there ascending continually from the surface to the higher parts of the atmosphere. Local causes will prevent the currents from the North and South Poles from neutralizing each other exactly on the equator. In the Atlantic Ocean, the region of calms and baffling winds thus occasioned, is always to the north of the equator, and its position varies at different periods of the year.

Such currents are continually taking place; but the direction of these currents, as observed at the surface of the earth, will be very materially altered in consequence of the motion of the earth itself. The earth turns round its axis once in twenty-four hours, in a direction from West to East; and, since

the circumference of the earth at the equator is about 24,000 miles*, a place on the equator is carried round at the rate of about 1000 miles an hour; but any place north or south of the equator, does not move so fast, for it will plainly move through a less circle in the same time. Thus, a place very near the Poles scarcely moves at all; a place in the latitude of 60°, as at the Shetland Isles, moves only half as fast as at the equator, or at the rate of 500 miles an hour; a place in the latitude of 30°, as at Cairo, in Egypt, moves at the rate of 866 miles an hour; and as we advance towards the equator, the motion of the parts of the earth's surface continually increases, as is shown in the table below, which is given by Capt. Hall.

Degrees of Latitude.	Miles an Hour by the Earth's daily Motion on her Axis.	Difference of Diurnal Motion in Miles an Hour.
90° (Pole)	0	—
80	174	174
70	342	168
60	500	153
50	643	143
40	766	123
30	866	100
20	949	74
10	985	45
0 (The Equator)	1000	15

If a current of air is passing from the Poles to the Equator over the surface of the earth, it is carried continually from parts which are moving from West to East, with less rapidity, into those which are moving with a greater rapidity. With reference, then, to the surface of the earth, the current which is passing from the Northern regions towards the Equator, will be affected with two motions, one from North to South, arising from the actual motion of the air, the other from East to West, arising from the greater motion of the surface of the earth itself from West to East. The consequence of those two motions will be the production of an oblique motion, in a direction between the two: or there will be perceived a wind blowing from about the N.E. quarter. In like manner, the southerly current of air flowing from the South Pole towards the Equator will be changed, as it advances, into a current which comes from the South-easterly quarter, relatively to the surface of the earth.

As these currents advance, it is plain that the constant friction of the air, upon the surface of the earth, tends to give the air the same motion which the earth has, and that, in proportion as that effect is produced, the rapidity of the relative easterly current slackens. The air gradually acquires the motion of the part of the earth with which it is in contact, moves on with it, and becomes relatively at rest. The above table, given by Captain Hall, will also show that the difference in the rapidity of motion of two points at a given distance from one another measured along any meridian, decreases rapidly near the Equator, so that, as the air approaches the Equator, the friction of the surface has a longer time to act upon the current of air, coming from the Poles, and is more effective.

Hence we might expect, as it is found, that the apparent easterly Trade Wind would become weaker near the Equator itself: and, as we have already seen, the two northerly and southerly currents also, in a great measure, counterbalance each other at the Equator. The great regular causes of a Trade Wind being thus checked, there will be, near the Equator, a belt of calms, or baffling and uncertain winds, while to the North and South there will be a more settled current tending upon the whole from East to West.

In the upper regions of the atmosphere, effects of

* Accurately, 24,899 miles.

a directly opposite nature may be expected. The warm air of the Equator will be carried above towards the North and South Poles, and these currents, moving from parts which have a greater diurnal motion, to those which have less, will cause a relative motion of the upper regions of the air from the West towards the East. Thus, the clouds above the Trade Winds are almost always observed to blow in an opposite direction to that of the wind: and Captain Hall found, on the top of the Peak of Teneriffe, a gentle gale blowing from the S.W. directly opposite to the course of the Trade Winds. The westerly winds, which prevail between the latitudes 30° and 60°, both in the northern and southern hemispheres, are no doubt occasioned by the descent of the more swiftly moving air, which has become cooled, and therefore heavier, in its passage from the Equator towards the Poles.

Those who are desirous of seeing the whole phenomena of the Trade Winds and Monsoons beautifully and familiarly explained, should consult Captain Basil Hall's *Fragments of Voyages and Travels*, Second Series, Vol. I., ch. vii. C.

JUVENILE VAGRANCY.

WE stated in a former paper*, that the *Society for the Prevention of Juvenile Vagrancy* had sent out a number of youthful Emigrants for apprenticeship to the Cape Colonists. This first experiment answered so well in every respect, that the plan was further pursued, and we understand that nearly 300 children have been provided with comfortable situations in that part of the world, during the present year, through the exertions of that valuable Society. The following extracts from *Cape and Graham's Town* newspapers, communicate the results of this interesting experiment.

ENGLISH APPRENTICES.

THE Committee for the Management of Juvenile Emigrants, intend to write to the Society in London by the first opportunity, for a certain number of Apprentices, boys and girls, the latter under fourteen years of age. It is requested, that applicants for one or more of these apprentices will state in writing to the Committee, the age at which they would prefer having them, and the employment for which they are required. The Committee take this opportunity of stating, for the satisfaction of the public here, and in England, that the youths hitherto received and apprenticed, have conducted themselves with the greatest propriety, and have given every proof that could be desired, that they will become most valuable members of society†.

JOHN FAIRBAIRNE, J. R. TUNES,
Cape Town, Sept. 2, 1833. Secretaries.

WE announced last week the arrival in Algoa Bay of the Maria, Captain Burton, having on board the twenty boys destined for this district by the *Society for the Suppression of Juvenile Vagrancy* in London. On Saturday at noon, the boys reached Graham's Town, and were, within one hour after their arrival, comfortably provided for in the habitations of the respective masters selected for them. The general appearance of these youths afforded much satisfaction to the Emigrant Committee, as well as to others whom curiosity had attracted to the spot as spectators of their arrival. All of them appeared remarkably healthy and cheerful, and most readily assented to the arrangements for their disposal, which had been made by the Committee previous to their arrival. From the number of unexceptionable applications which had been made, no other equitable mode presented itself, than that of selecting twenty masters by ballot, making, however, eventually, some few alterations, which the previous habits and pursuits of the boys rendered absolutely necessary. The unsuccessful applicants will have the preference on the next arrival, which we have reason to expect will not be very

distant, and, we may venture to say, that if on this occasion five times the number had been sent, there would have been no difficulty in providing for them all.

By the communication from Captain Brenton to the Committee appointed at Algoa Bay by the London Society, and from them to the Emigrant Committee of Albany,—extracts from which we annex,—it appears, that the total cost of passage and outfit of each of these boys, including every item, will probably amount to 12*l.* 10*s.* each, which the Society at home look to have eventually refunded from hence.

We need not urge, we are assured, upon the respective masters of these friendless boys, the sacred obligation under which they are laid, to treat them with due kindness and regard, and to pay such attention to their morals, as will render them an actual benefit to the community of which they now form a part. It is clear, that they have a more than ordinary claim to the sympathy of those who have so adventitiously become their guardians; and the simple fact of their forlorn condition, adds very greatly to the weight of the obligation. But, it is useless to dwell on this part of the subject, confident as we are, that every circumstance in the future history of these young emigrants, will be a full and sufficient refutation of the unfounded calumny mentioned by Captain Brenton, and will prove, that those who give currency to such allegations are utterly unacquainted with the subject upon which they suffer themselves, so confidently, yet so rashly, to pronounce judgment.

The Committee have also accepted a trust of no ordinary difficulty, and which will require in its discharge great judgment and delicacy. It must never be lost sight of, that they stand in the situation of the parents of these boys, and hence they are equally bound to exercise due precaution, that no one is so placed as to be exposed to the contamination of vice, as they are to guard against his being subjected to the effects of privation and ill-treatment. It is proper, also, that the dispositions of the youths should be consulted before they are placed in service, in order that they may be extensively serviceable both to themselves and to their masters. This point, as well as an acquaintance with the previous habits of each individual, will be very important, and serve as the best guide to the selection of the most suitable situations for them. We have a perfect confidence in the discretion as well as humanity of the present Committee; they are not only men of business, but they have families, and their characters and habits give the best assurance that every arrangement will be made, conducive to the future welfare of the boys, as well as to that of the community at large. The youths have most of them been to school, and are by no means destitute of intelligence; it therefore will not be irrelevant, if we state what is the line of conduct expected from them.

It is proper that these boys should understand that they have now the good fortune, not only to be placed in comfortable circumstances, with regard to all the necessities of life, but that they are associated with a community of young persons, who are, generally speaking, distinguished for their exemplary deportment, and that a contrary line of conduct on their parts will, most assuredly, meet with merited disgrace and punishment. At present, their characters are viewed as equivocal, and it is incumbent on them so to behave, that this feeling may be removed. They are bound so to act, that if there be any persons who have permitted themselves to indulge in uncharitable reflections and surmises, they may feel some remorse—not merely for refusing to aid, but aspersing those whose sole offence, as far as they are informed, is their forlorn and destitute condition; it will be for them to show, that they are not insensible to kindness conferred—a fact which will be best indicated by a constant anxiety to discharge, with diligence and integrity, the duties assigned to them, by steadily availing themselves of the various means of improvement now placed within their reach, and by carefully shunning all those pursuits which foster idleness, debase the mind, and eventually lead to irretrievable ruin‡.

Graham's Town is now a thriving place, it contains more than six hundred good substantial houses, two public libraries, a handsome commercial hall in progress, a newspaper, several excellent inns, a population of between two and three thousand souls, and its annual exports exceed 50,000*l.* sterling.

‡ *Graham's Town Journal*, July 18, 1833.

* Vol. III. p. 155.

† *South African Advertiser*, Sept. 4, 1833.

THE IDOLS OF THE SAXONS.

I. SUNDAY.

At this happy period of the world, we cannot reflect on the idolatry of ancient times, without some astonishment at the folly which has, in various regions, so sadly clouded the human mind. We feel, indeed, that it is impossible to contemplate the heavens above us; to view the planets moving in their governed order; to find comets darting from system to system in an orbit of wonderful extent; to see stars beyond stars, and to have evidence of the light of others, whose full beams have not yet reached us: we cannot meditate on these things, without a feeling of awe, that this grandeur of nature proclaims an Author tremendously great. But it is difficult to conceive, how the lessons of the skies should have taught that narrow and confined idolatry, which their amazing grandeur and almost endless extent seem calculated to forbid.

In every nation but the Jewish, a gross system of superstition was gradually established. Human folly chose out strange objects to represent the Deity; the most ancient of these were the heavenly bodies, the worship of which was so strictly forbidden to the Israelites; "The sun, and the moon, and the stars, even all the host of heaven, which the Lord thy God hath divided unto all nations under the whole heaven." (Deut. iv. 19.) The departed heroes and kings, belonging to heathen nations, were raised into gods. Foolish fancy soon added so many others, that the air, the sea, the rivers, the woods, and the earth, became stocked with divinities: and it was easier, as an ancient sage remarked, to find a deity than a man.

When our Saxon ancestors had settled themselves in England, they had many gods, and worshipped various images. Speed, the historian of Britain, observes, "As in virtues the Saxons outstripped most Pagans, so in the zeal of their heathenish superstition and idolatrous service, they equalled any of them; for besides *Herthus*, or mother Earth, they worshipped Mercury (or more probably Mars), under the name of *Woden*, as their principal god of battle, and sacrificed to him their prisoners taken in war; and of him named one of the week-days *Wodensday* (WEDNESDAY). His wife, named *Frea*, was, by the like foolery held to be Venus, a goddess, unto whom another of their week-days was assigned for name and service, which of us is called *FRIDAY*."

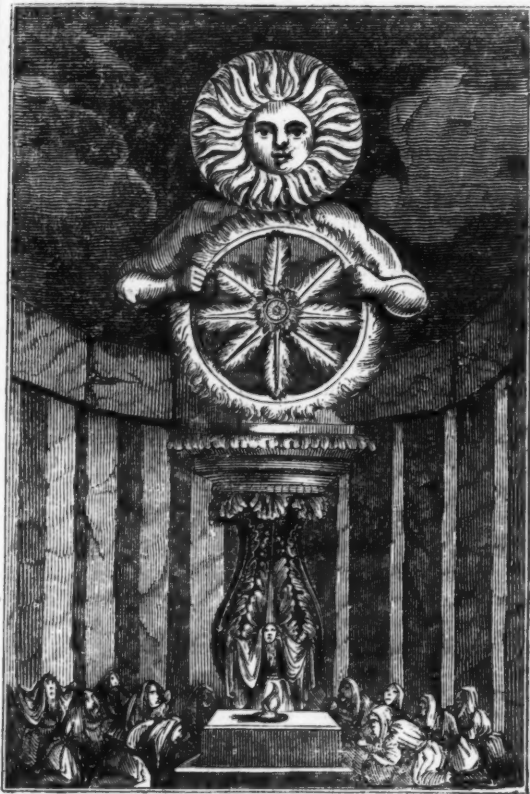
There is, however, a beauty in the name given by the Saxon and German nations to the Deity, whom they ignorantly worshipped, which is not equalled by any other, except his hallowed Hebrew name, *JEHOVAH*. The Saxons call him *GOD*; which is literally *THE GOOD*; the same word signifying both the Deity and his most endearing quality.

Mr. Sharon Turner, to whose *History of the Anglo-Saxons* we are indebted for most of the above remarks, observes, that the peculiar system of worship among the English Saxons is too little known to us for its stages to be distinguished, or its progress described. It appears to have been of a very mixed nature, and to have been long in existence. Some of the objects of their adoration, however, we find in their names for the days of the week:—

Sunday	THE SUN'S day
Monday	THE MOON'S day.
Tuesday	Tiw's (or TUISCO's) day.
Wednesday	WODEN's day.
Thursday	Thunre's (or THOR's) day.
Friday	Friga's (or FREA's) day.
Saturday	Seterne's (or SATURN's) day.

We propose to give, from time to time, cuts of these

seven Saxon idols: commencing with that of the Sun, we quote the following description from *Richard Verstegan*, a laborious English antiquary, who wrote in 1605.



THE IDOL OF THE SUN.

"He was made as here appeareth, set upon a pillar, his face as it were brightened with gleams of fire, and holding, with both his arms stretched out, a burning wheel upon his breast: the wheel being to signify the course which he runneth round about the world; and the fiery gleams and brightness, the light and heat wherewith he warmeth and comforteth the things that live and grow."

CHARACTER OF A TRUE FRIEND.—Concerning the man you call your friend—tell me, will he weep with you in the hour of distress? Will he faithfully reprove you to your face, for actions for which others are ridiculing or censuring you behind your back? Will he dare to stand forth in your defence, when detraction is secretly aiming its deadly weapons at your reputation? Will he acknowledge you with the same cordiality, and behave to you with the same friendly attention, in the company of your superiors in rank and fortune, as when the claims of pride or vanity do not interfere with those of friendship? If misfortune and losses should oblige you to retire into a walk of life, in which you cannot appear with the same distinction, or entertain your friends with the same liberality as formerly, will he still think himself happy in your society, and, instead of gradually withdrawing himself from an unprofitable connexion, take pleasure in professing himself your friend, and cheerfully assist you to support the burden of your afflictions? When sickness shall call you to retire from the gay and busy scenes of the world, will he follow you into your gloomy retreat, listen with attention to your "tale of symptoms," and minister the balm of consolation to your fainting spirit? And lastly, when death shall burst asunder every earthly tie, will he shed a tear upon your grave, and lodge the dear remembrance of your mutual friendship in his heart, as a treasure never to be resigned? The man who will not do all this, may be your companion—your flatterer—your seducer,—but, depend upon it, he is not your friend.—ENFIELD.

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